

IN THE CLAIMS:

- 1 1. (currently amended) An electrostatic discharge (ESD) protective structure that
2 protects an integrated semiconductor circuit connected between a first potential bus with
3 a first supply potential (VCC) and a second potential bus with a second supply potential
4 (VSS), said electrostatic discharge protective structure comprising:
5 a laterally formed electrostatic discharge diode having a first region doped with
6 a first conduction type and a second region, spaced apart from said first region;
7 **said second region being doped with** a doped second conduction type, wherein
8 said electrostatic discharge protective structure is located between the first and second
9 potential busses and drains off an overvoltage pulse to one ~~[f0]~~ **of** the first and second
10 potential busses, wherein said laterally formed electrostatic discharge diode includes a
11 gate electrode located between said first region and said second region, **said first**
12 **region being separated from said second region by a distance that corresponds**
13 **[corresponding]** to ~~[the width (W) or the length]~~ **a dimension** of the gate electrode.
- 1 2. (original) The electrostatic discharge protective structure of claim 1, wherein
2 said protective structure includes a semiconductor body having a surface in which said
3 first region and said second region are embedded, wherein said first region is connected
4 via a first electrode to the first potential bus, and said second region is connected via a
5 second electrode to the second potential bus.
- 1 3. (original) The electrostatic discharge protective structure of claim 2, wherein

2 said semiconductor body includes charge carriers of the second conduction type, and
3 said gate electrode and said second electrode are connected to said second potential bus.

1 4. (original) The electrostatic discharge protective structure of claim 2, wherein
2 said semiconductor body includes charge carriers of the first conduction type, and at
3 least one well of the second conduction type is embedded in said semiconductor body,
4 and said first and second regions are embedded in said well.

1 5. (currently amended) The electrostatic discharge protective structure of claim 4,
2 wherein said second ~~[regions]~~ region laterally ~~[encløse]~~ encloses said first ~~[regions]~~
3 region.

1 6. (original) The electrostatic discharge protective structure of claim 4, wherein
2 the integrated semiconductor circuit is configured and arranged as an MOS or CMOS
3 circuit.

1 7. (original) The electrostatic discharge protective structure of claim 2,
2 comprising a gate dielectric that spaces said semiconductor body at a distance from the
3 gate electrode.

1 8. (original) The electrostatic discharge protective structure of claim 7, wherein
2 said gate dielectric contains silicon dioxide and said gate electrode contains polysilicon.

1 9. - 12. (canceled).

1 13. (currently amended) An integrated circuit with electrostatic discharge
2 protection, said integrated circuit comprising:
3 a circuit to be protected; **and**
4 an electrostatic discharge device that is disposed electrically parallel to said
5 circuit to be protected between first and second voltage busses, wherein said
6 electrostatic discharge device includes a laterally shaped electrostatic discharge diode
7 having:
8 (i) a first region doped with a first conduction type material within a
9 substrate;
10 (ii) a second region doped with a second conduction type material within
11 said substrate; and
12 (iii) a gate electrode having a width W and located between said first and
13 second regions such that said first and second regions are separated by the width
14 W.

1 14. (original) The integrated circuit of claim 13, comprising a gate oxide disposed
2 on said substrate between said first and second conduction regions and underlying said
3 gate electrode.

1 15. (original) The integrated circuit of claim 14, comprising a first electrode
2 disposed on said substrate overlaying said first region, and a second electrode disposed
3 on said substrate overlaying said second region, wherein said first electrode is
4 connected to the first voltage bus and said second electrode is connected to said second

5 bus.

1 16. (new) An integrated circuit with electrostatic discharge protection, said
2 integrated circuit comprising:

3 a circuit to be protected; and

4 an electrostatic discharge device that is disposed electrically parallel to said

5 circuit to be protected between first and second voltage busses, wherein said

6 electrostatic discharge device includes a laterally shaped electrostatic discharge diode

7 having:

8 (i) a first doped region doped with a first conduction type material within
9 a substrate;

10 (ii) a first electrode in communication with said first doped region, said
11 first electrode being coupled to the first voltage bus;

12 (iii) a second doped region doped with a second conduction type
13 material within said substrate;

14 (iv) a second electrode in communication with said second doped region,
15 said second electrode being coupled to the second voltage bus;

16 (v) an insulator located between said first and second electrodes, and
17 having an insulator dimension that corresponds to the distance between said first
18 and second regions; and

19 (vi) a gate electrode in communication with and contiguous with said
20 insulator along a gate electrode dimension thereof.

1 17. (new) The integrated circuit of claim 16, wherein said insulator includes an
2 oxide.

1 18. (new) The integrated circuit of claim 18, wherein said oxide is silicon dioxide.